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Application Number 09/822,691

Filing Date March 30, 2001

First Named Inventor William Hreha

Art Unit 2157

Examiner Name El Hadji Sall

Attorney Docket Number YR1-11

ENCLOSURES (Check all that apply)

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Date	September 27, 2006	Reg. No.	25,657

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PATENT
YR1-11

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: WILLIAM HREHA ET AL	:	September 13, 2006
Serial No.: 09/822,691	:	
Filed: March 30, 2001	:	Group Art Unit: 2157
For: DYNAMIC RESOURCE ALLOCATION	:	
ARCHITECTURE FOR DIFFERENTIATED	:	Examiner: El Hadji Sall
SERVICES OVER BROADBAND	:	
COMMUNICATION NETWORKS	:	

DECLARATION

I hereby state that I have reviewed and understand the contents of the reference cited in the above patent application, U. S. Patent No. 6,400,696, filed November 17, 2000, issued June 4, 2002, having a common assignee, of which I am the sole inventor. I further state that I performed acts to establish invention of the subject matter of the rejected claim prior to the effective date of the reference on which the rejection is based. I further declare that the patented claims of the reference U. S. Patent No. 6,400,696 do not claim the same patentable invention as defined in the above-identified application, nor is the instant rejection based upon a statutory bar arising from said reference.

The attached record, Exhibit A, establishes in character and weight a reduction to practice of the rejected claims prior to the effective date of the reference. In Exhibit A, figure 2 there is seen a gateway that interfaces to an ISP or corporate network. The terminal shown is a local area network (LAN) edge device which, in addition, is part of the dynamic resource allocation system. A portion of this system comprises a classifier for identifying specific types of messages. A satellite is shown as labeled that provides a communication link between the gateway and the LAN edge device. One or more personal computers coupled by way of a network to the LAN edge device are shown as labeled. A dynamic resource allocation system that supports differentiated services with different levels of priority is shown to reside in the terminal, as well as the gateway, as indicated. The portions of the dynamic resource allocations which are seen to reside in the terminal, as well as the gateway, comprise the Internet protocol network that further comprises a classifier for identifying specific types of messages and a dynamic assignment/multiple access (DAMA) communication protocol for transmitting data over the dynamic resource allocation system.

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment or both under 18 U.S.C. 1001 and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

20 Sept 06
Date

William Hreha
William Hreha



EXHIBIT A

Page 1 of 2

Discovery Wording
William Hreha

Background:

The concept of using Dynamic Assignment/Multiple Access on networks of limited bandwidth is general knowledge. This is evident from by the numerous papers concerning the subject available on the Internet. All DAMA algorithms follow the same general concepts. An edge device wishing to transmit data over a limited bandwidth link requests resources from a resource manager. The resource manager, based on fairness criteria grants all or some of the request. The edge device accepts the allocation and transmits the data using the granted resources.

/// REDACTED ///

Local Implementation:

The system topology is as depicted in figure 2. This system is designed to provide high-speed, cost-effective, and reliable data connectivity required by consumers and small office/home office (SOHO) markets. The only networking protocol supported by the Local Area Network edge device is the Internet Protocol (IP). IP may be routed over either 802.3 Ethernet, USB, 802.11, or possibly future protocols.

This service is provided through a point to point connectivity between edge devices and either their ISP or their corporate network. This is enabled by a bent pipe (non processing) satellite that provides a fixed connectivity to an aggregation point on the ground. Resource allocations are based on consumer profiles, link bandwidth limitations, and end to end error rate performance.

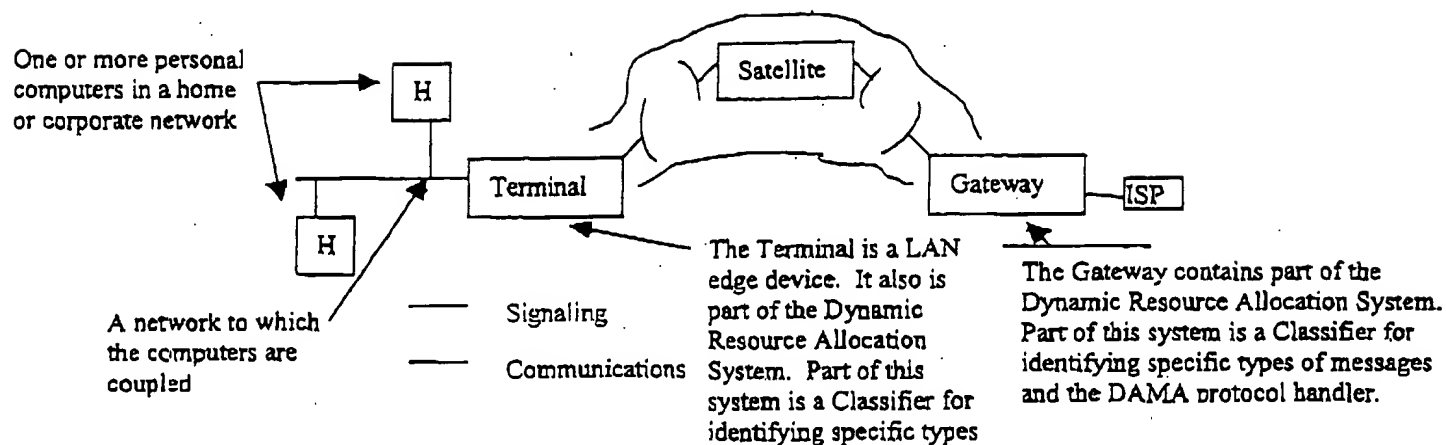


Figure 2: Loral DAMA Application.

The signaling within this system is based on non ATM protocols. These are likely to be one of the public Multiple Access Control signaling standards listed below.

- DVB-RCS
- DOCIS
- 802.16

Signaling may be based on the Loral Proprietary Protocol SATMAC. Each of these supports both in band and out of band signaling. Part of the activity is to evaluate the efficiency of these protocols, other publicly available protocols, or derivatives from these standards. The DAMA algorithms will be built on top of the one that provides the best bandwidth efficiency.

The network will accommodate multiple types of data, video or voice traffic. Quality-of-service levels are guaranteed by DIFSERV like protocols.

Differences:

As can be seen the markets, systems, and services are significantly different between these two implementations.

- 1) ~~Redacted~~ These concerns are minimized in the Loral implementation.
- 2) Processing payload implementations require that the DAMA algorithms concern themselves with the availability of resources within the satellite. The Loral implementation does not have this concern.
- 3) Concerns on congestion control are significantly different between the two systems.
- 4) The Loral implementation does not support meshed networks. ~~Redacted~~
- 5) Because the Multiple Access Control (MAC) protocols are different the DAMA algorithms will not be the same. The information available will be different. The timing on processing will be different. The messaging between protocol layers will be different.
- 6) The network elements in the Loral implementation are considered to be always on
- 7) Because of the implementation of different MAC protocols and the different topologies the timing and synchronization mechanisms are likely to be different. Again changing the algorithm implementation.